I. AMENDMENTS

In the Claims:

Please amend claims 1-3, 6, 10, 11, 14, 15, 30, 33 and 38-40 by deleting the bracketed material and adding the underlined material as follows:

1. (Amended) A method of detecting the presence of a target [BL172] polynucleotide in a test sample, comprising:

(a) contacting said test sample with at least one [BL172-specific] diagnostic polynucleotide selected from the group consisting of a polynucleotide having at least 50% identity with SEQUENCE ID NO 1, SEQUENCE ID NO 2 or complements thereof; and a polynucleotide having at least 60% identity with SEQUENCE ID NO 4, SEQUENCE ID NO 5 or [complement] complements thereof; and

(b) detecting the presence of said target [BS124] polynucleotide in the test sample[, wherein said BS124-specific polynucleotide has at least 50% identity with a polynucleotide selected from the group consisting of SEQUENCE ID NO 1, SEQUENCE ID NO 2, SEQUENCE ID NO 3, SEQUENCE ID NO 4, SEQUENCE ID NO 5, and fragments or complements thereof].

2. (Amended) The method of claim 1, wherein said target [BS124] polynucleotide is attached to a solid phase prior to performing step (a).

3. A method for detecting mRNA [of BS124] of a target polynucleotide indicative of breast tissue disease in a test sample, comprising:

(a) performing reverse transcription with at least one primer in order to produce cDNA;

(b) amplifying the cDNA obtained from step [(a) using BS124 oligonucleotides as sense and antisense primers to obtain BS124 amplicon] to obtain an amplicon, said

amplifying using sense and antisense primers wherein each primer comprises at least about 10 nucleotides having at least 90% identity with a polynucleotide selected from the group consisting of SEQUENCE ID NO 1; SEQUENCE ID NO 2; SEQUENCE ID NO 4; SEQUENCE ID NO 5; and complements thereof; and

(c) detecting the presence of said [BS124] amplicon, wherein the [BS124 oligonucleotides utilized in steps (a) and (b) have at least 50% identity with a polynucleotide selected from the group consisting of SEQUENCE ID NO 1, SEQUENCE ID NO 2, SEQUENCE ID NO 3, SEQUENCE ID NO 4, SEQUENCE ID NO 5, and fragments thereof] presence of the amplicon indicates detection of the target polynucleotide indicative of breast tissue disease in the test sample.

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6. (Amended) A method of detecting a target [BS124] polynucleotide indicative of breast tissue disease in a test sample suspected of containing said target, comprising:

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(a) contacting said test sample with at least one [BS124 oligonucleotide as a] sense primer and with at least [one BS124 oligonucleotide as an] anti-sense primer wherein each primer comprises at least about 10 nucleotides having at least 90% identity with a polynucleotide selected from the group consisting of SEQUENCE ID NO:1, SEQUENCE ID NO 2, SEQUENCE ID NO 4, SEQUENCE ID NO 5 and complements thereof and amplifying to obtain a first stage reaction product;

(b) contacting said first stage reaction product with at least one [other BS124] oligonucleotide probe to obtain a second stage reaction product, with the proviso that the [other BS124] oligonucleotide probe is (i) located 3' to the [BS124 oligonucleotides] sense and antisense primers utilized in step (a) and (ii) is complementary to said first stage reaction product, wherein the probe comprises at least about 10 contiguous nucleotides having at least 90% identity with a polynucleotide selected from the group consisting of SEQUENCE ID NO 1, SEQUENCE ID NO 2, SEQUENCE ID NO 4, SEQUENCE ID NO 5 and complements thereof; and

(c) detecting said second stage reaction product as an indication of the presence of the target [BS124] polynucleotide indicative of breast tissue disease in the

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test sample[, wherein the BS124 oligonucleotides utilized in step (a) and (b) have at least 50% identity with a sequence selected from the group consisting of SEQUENCE ID NO 1, SEQUENCE ID NO 2, SEQUENCE ID NO 3, SEQUENCE ID NO 4, SEQUENCE ID NO 5, and fragments or complements thereof].

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10. A test kit useful for detecting [BS124] a target polynucleotide indicative of breast tissue disease in a test sample, comprising a container containing at least one [BS124] polynucleotide [having at least 50% identity with a sequence selected from the group consisting of SEQUENCE ID NO 1, SEQUENCE ID NO 2, SEQUENCE ID NO 3, SEQUENCE ID NO 4, SEQUENCE ID NO 5, and fragments or complements thereof] selected from the group consisting of a polynucleotide having at least 50% identity with SEQUENCE ID NO 1, SEQUENCE ID NO 2 or complements thereof; and a polynucleotide having at least 60% identity with SEQUENCE ID NO 4, SEQUENCE ID NO 5 or complements thereof.

11. A purified polynucleotide [or fragment thereof derived from a BS124 gene] selected from the group consisting of a polynucleotide having at least 50% identity with SEQUENCE ID NO 1, SEQUENCE ID NO 2 or complements thereof; and a polynucleotide having at least 60% identity with SEQUENCE ID NO 4, SEQUENCE ID NO 5 or complements thereof[, wherein said polynucleotide is capable of selectively hybridizing to the nucleic acid of said BS124 gene and has at least 50% identity with a polynucleotide selected from the group consisting of (a) SEQUENCE ID NO 1, SEQUENCE ID NO 2, SEQUENCE ID NO 4, SEQUENCE ID NO 5, and complements thereof, and (b) fragments of SEQUENCE ID NO 1, SEQUENCE ID NO 2, and SEQUENCE ID NO 3].

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14. (Amended) The purified polynucleotide of claim 11, wherein said polynucleotide comprises a sequence encoding at least one [BS124] epitope.

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15. (Amended) A recombinant expression system comprising a nucleic acid sequence that includes an open reading frame [derived from BS124] operably linked to a control sequence compatible with a desired host, wherein said [nucleic acid sequence] open reading frame [has at least 50% identity with a sequence] is selected from the group consisting of a polynucleotide having at least 50% identity with SEQUENCE ID NO 1, SEQUENCE ID NO 2, [SEQUENCE ID NO 3,] or complements thereof; and a polynucleotide having at least 60% identity with SEQUENCE ID NO 4, SEQUENCE ID NO 5, [and fragments] or complements thereof.

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30. (Amended) A cell transfected with a nucleic acid sequence encoding at least one [BS124] epitope, wherein said nucleic acid sequence is selected from the group consisting of [SEQUENCE ID NO 1, SEQUENCE ID NO 2, SEQUENCE ID NO 3, SEQUENCE ID NO 4, SEQUENCE ID NO 5 and fragments] a polynucleotide having at least 50% identity with SEQUENCE ID NO 1, SEQUENCE ID NO 2 or complements thereof; and a polynucleotide having at least 60% identity with SEQUENCE ID NO 4, SEQUENCE ID NO 5 or complements thereof.

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33. (Amended) A composition of matter comprising a [BS124] polynucleotide [or fragment thereof, wherein said polynucleotide has at least 50% identity with a polynucleotide] selected from the group consisting of: (a) a polynucleotide having at least 50% identity to SEQUENCE ID NO 1, SEQUENCE ID NO 2[, SEQUENCE ID NO 4, SEQUENCE ID NO 5,] and complements thereof, and (b) [fragments of SEQUENCE ID NO 1, SEQUENCE ID NO 2, and SEQUENCE ID NO 3] a polynucleotide having at least 60% identity to SEQUENCE ID NO 4, SEQUENCE ID NO 5 and complements thereof.

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38. (Amended) A [gene, or a fragment thereof,] purified polynucleotide which codes for a [BS124] protein which comprises an amino acid sequence having at least 50% identity with SEQUENCE ID NO 22.